



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

| APPLICATION NO.                   | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------------------------|-------------|----------------------|---------------------|------------------|
| 10/721,691                        | 11/26/2003  | Karl Reinitz         | 0121                | 6148             |
| 32366                             | 7590        | 06/29/2007           |                     |                  |
| BRUCE E. WEIR                     |             |                      | EXAMINER            |                  |
| 12 SPARROW VALLEY COURT           |             |                      | LANG, AMY T         |                  |
| MONTGOMERY VILLAGE, MD 20886-1265 |             |                      |                     |                  |
|                                   |             |                      | ART UNIT            | PAPER NUMBER     |
|                                   |             |                      | 3731                |                  |
|                                   |             |                      | MAIL DATE           | DELIVERY MODE    |
|                                   |             |                      | 06/29/2007          | PAPER            |

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

W

|                          |                               |                               |  |
|--------------------------|-------------------------------|-------------------------------|--|
| <b>Interview Summary</b> | Application No.<br>10/721,691 | Applicant(s)<br>REINITZ, KARL |  |
|                          | Examiner<br>Amy T. Lang       | Art Unit<br>3731              |  |

All participants (applicant, applicant's representative, PTO personnel):

- (1) Amy T. Lang. (3) Karl Reinitz.  
 (2) Jackie Ho Tan-Uyen. (4) \_\_\_\_\_

Date of Interview: 07 June 2007.

Type: a) ☒ Telephonic b) ☐ Video Conference  
 c) ☐ Personal [copy given to: 1) ☐ applicant 2) ☐ applicant's representative]

Exhibit shown or demonstration conducted: d) ☒ Yes e) ☐ No.

If Yes, brief description: Demonstrated device and how the device works as written in the specification.

Claim(s) discussed: All.

Identification of prior art discussed: Hill and Kirk.

Agreement with respect to the claims f) ☒ was reached. g) ☐ was not reached. h) ☐ N/A.

Substance of Interview including description of the general nature of what was agreed to if an agreement was reached, or any other comments: Discussed invention, prior art, and the differences between the two. Examiner will help inventor to redraft claims to overcome the prior art references of record. See attached sheet.

(A fuller description, if necessary, and a copy of the amendments which the examiner agreed would render the claims allowable, if available, must be attached. Also, where no copy of the amendments that would render the claims allowable is available, a summary thereof must be attached.)

THE FORMAL WRITTEN REPLY TO THE LAST OFFICE ACTION MUST INCLUDE THE SUBSTANCE OF THE INTERVIEW. (See MPEP Section 713.04). If a reply to the last Office action has already been filed, APPLICANT IS GIVEN A NON-EXTENDABLE PERIOD OF THE LONGER OF ONE MONTH OR THIRTY DAYS FROM THIS INTERVIEW DATE, OR THE MAILING DATE OF THIS INTERVIEW SUMMARY FORM, WHICHEVER IS LATER, TO FILE A STATEMENT OF THE SUBSTANCE OF THE INTERVIEW. See Summary of Record of Interview requirements on reverse side or on attached sheet.



(JACKIE) TAN-UYEN HO  
PRIMARY EXAMINER

Examiner Note: You must sign this form unless it is an Attachment to a signed Office action.

6/22/07  
Examiner's signature, if required

10/721,691

Amendments to the Claims:

Claim 1 (Currently Amended). A suturing apparatus, comprising:

a body;

a J-shaped needle, ~~the needle having a proximal end and a distal end, the proximal end of the needle attached to the body and having a first central axis portion located within the proximal end of the needle, wherein~~

the proximal end of the needle is attached to the body and comprises an elongated, straight portion of the J-shape, a first central axis is located within the proximal end of the needle,

the distal end of the needle having a needle tip comprising a tapered needle tip capable of penetrating tissue and having at least one passage to hold suture material, the needle tip having a tapered portion, the tapered portion of the needle tip having a center line comprising the centroids of adjacent selected planar cross-sections of the tapered portion, each selected planar cross-section selected for having the smallest area of all a smaller area than each proximally located planar cross-section having the same centroid as the selected planar cross-section, the distal end of the needle formed so that at least a first line is tangent to the center line forming an acute angle with the and the first central axis portion;

a moveable arm, the moveable arm having a proximal end and a distal end,  
the proximal end of the moveable arm pivotally ~~movably~~ attached to the body,  
the distal end of the moveable arm ~~operable to contact at least a portion of the needle tip~~ consisting of a needle tip protector and pivoting from a closed position wherein the needle tip protector contacts the needle tip to an open position wherein the movable arm pivots toward the straight elongated portion of the J-shape and no longer contacts the needle tip; and

a moveable arm actuator, the moveable arm actuator operable to move the moveable arm between the an open position and the a closed position ~~the closed position occurring when the distal end of the moveable arm contacts at least a portion of the needle tip, the open position occurring when the distal end of the moveable arm does not contact the needle tip.~~

Claim 2 (Canceled)

Claim 3 (Canceled)

Claim 4 (Canceled)

Clam 5 (Canceled)

Claim 6 (Original). A suturing apparatus as claimed in claim 1, wherein the moveable arm actuator comprises a compression member, the compression member disposed within the body, the compression member operable to urge the movable arm to the open position.

Claim 7 (Original). A suturing apparatus as claimed in claim 6, wherein the compression member is a spring.

Claim 8 (Original). A suturing apparatus as claimed in claim 1, wherein the apparatus comprises materials capable of tolerating autoclave sterilization.

Claim 9 (Original). A suturing apparatus as claimed in claim 1, further comprising a first handle and a second handle, the first handle and the second handle attached to opposite sides of the body.

Claim 10 (Previously Amended). A suturing apparatus as claimed in claim 1, further comprising a first depression and a second depression, the first depression and the second depression disposed upon opposite sides of the body in locations where they may accept an operator's fingers while the operator is placing sutures.

Claim 11 (Previously Amended). A suturing apparatus as claimed in claim 1, further comprising a first depression and a second depression, the first depression and the second depression disposed upon the underside of the body in locations where they may accept an operator's fingers while the operator is placing sutures.

Claim 12 (Currently Amended). A suturing apparatus as claimed in claim 1, wherein the apparatus is configured optimized for left-handed use.

Claim 13 (Currently Amended). A suturing apparatus, comprising:

a body;

a hook-shaped needle, ~~the needle~~ having a proximal end and a distal end, wherein

~~the proximal end of the needle is attached to the body, the distal end of the needle curved to form a hook, the distal end of the needle having means for penetrating tissue, the distal end of the needle having means for holding suture material; and comprising an elongated, straight portion of the hook shape, a first central axis is located within the proximal end of the needle,~~

the distal end of the needle comprising a tapered needle tip capable of penetrating tissue and having at least one passage to hold suture material, the tapered portion of the needle tip having a center line comprising the centroids of adjacent selected planar cross-sections of the tapered portion, each selected planar cross-section selected for having a smaller area than each proximally located planar cross-section having the same centroid as the selected planar cross-section, the distal end of the needle formed so that at least a first line is tangent to the center line and the first central axis portion;

a moveable arm, the moveable arm having a proximal end and a distal end,  
the proximal end of the moveable arm pivotally ~~mounted within~~ attached to  
the body,

the distal end of the moveable arm ~~having means to cover at least a portion~~  
~~of the needle tip~~ consisting of a needle tip protector and pivoting from a closed  
position wherein the needle tip protector contacts the needle tip to an open  
position wherein the movable arm pivots toward the straight elongated portion of  
the hook-shape and no longer contacts the needle tip; and

a moveable arm actuator, the moveable arm actuator operable to move the  
movable arm between the an open position and the a closed position; ~~the closed~~  
~~position occurring when the distal end of the moveable arm covers at least a~~  
~~portion of the needle tip, the open position occurring when the distal end of the~~  
~~moveable arm does not contact the needle tip, the moveable arm actuator~~ and  
comprising a compression member, ~~the compression member disposed within~~  
the body,

the compression member operable to urge the movable arm to the open  
position.

Claim14 (Original). A suturing apparatus as claimed in claim 13, wherein the  
apparatus comprises materials capable of tolerating autoclave sterilization.

Claim15 (Currently Amended). A suturing apparatus as claimed in claim 13,  
wherein the apparatus is configured for left-handed use.

Claim 16 (Original). A suturing apparatus as claimed in claim 13, further  
comprising a first handle and a second handle, the first handle and the second  
handle attached to opposite sides of the body.

Claim 17 (Original). A suturing apparatus as claimed in claim 13, further  
comprising a first depression and a second depression, the first depression and  
the second depression disposed upon opposite sides of the body.

Claim18 (Original). A suturing apparatus as claimed in claim 13, further  
comprising a first depression and a second depression, the first depression and  
the second depression disposed upon the underside of the body.

19 (Canceled)

Amendments to the Specification:

Amend paragraph [0021] as follows:

A hole 135 for suture material is bored radially through the needle a short  
distance below the base of the tip 133. The needle preferably comprises a  
proximal end and a distal end, the proximal end of the needle attached to the  
body and having a first central axis portion located within the proximal end of the

needle, the distal end of the needle having a needle tip capable of penetrating tissue and having at least one passage to hold suture material, the tapered portion of the needle tip having a center line comprising the centroids of adjacent selected planar cross-sections of the tapered portion, each selected planar cross-section selected for having a smaller area than each proximally located planar cross-section having the same centroid as the selected planar cross-section, the distal end of the needle formed so that at least a first line is tangent to the center line and the first central axis portion.

10/721,691

How the claims will read when amended:

Claim 1 (Currently Amended). A suturing apparatus, comprising:

a body;

a J-shaped needle having a proximal end and a distal end wherein

the proximal end of the needle is attached to the body and comprises an elongated, straight portion of the J-shape, a first central axis is located within the proximal end of the needle,

the distal end of the needle comprising a tapered needle tip capable of penetrating tissue and having at least one passage to hold suture material, the tapered portion of the needle tip having a center line comprising the centroids of adjacent selected planar cross-sections of the tapered portion, each selected planar cross-section selected for having a smaller area than each proximally located planar cross-section having the same centroid as the selected planar cross-section, the distal end of the needle formed so that at least a first line is tangent to the center line and the first central axis portion;

a moveable arm, the moveable arm having a proximal end and a distal end,

the proximal end of the moveable arm pivotally attached to the body,

the distal end of the moveable arm consisting of a needle tip protector and pivoting from a closed position wherein the needle tip protector contacts the needle tip to an open position wherein the movable arm pivots toward the straight elongated portion of the J-shape and no longer contacts the needle tip; and

a moveable arm actuator, the moveable arm actuator operable to move the movable arm between the open position and the closed position.

Claim 2 (Canceled)

Claim 3 (Canceled)

Claim 4 (Canceled)

Claim 5 (Canceled)

Claim 6 (Original). A suturing apparatus as claimed in claim 1, wherein the moveable arm actuator comprises a compression member, the compression member disposed within the body, the compression member operable to urge the movable arm to the open position.

Claim 7 (Original). A suturing apparatus as claimed in claim 6, wherein the compression member is a spring.

Claim 8 (Original). A suturing apparatus as claimed in claim 1, wherein the apparatus comprises materials capable of tolerating autoclave sterilization.

Claim 9 (Original). A suturing apparatus as claimed in claim 1, further comprising

a first handle and a second handle, the first handle and the second handle attached to opposite sides of the body.

Claim 10 (Previously Amended). A suturing apparatus as claimed in claim 1, further comprising a first depression and a second depression, the first depression and the second depression disposed upon opposite sides of the body in locations where they may accept an operator's fingers while the operator is placing sutures.

Claim 11 (Previously Amended). A suturing apparatus as claimed in claim 1, further comprising a first depression and a second depression, the first depression and the second depression disposed upon the underside of the body in locations where they may accept an operator's fingers while the operator is placing sutures.

Claim 12 (Currently Amended). A suturing apparatus as claimed in claim 1, wherein the apparatus is configured for left-handed use.

Claim 13 (Currently Amended). A suturing apparatus, comprising:

a body;

a hook-shaped needle-having a proximal end and a distal end, wherein the proximal end of the needle is attached to the body and comprising an elongated, straight portion of the hook shape, a first central axis is located within the proximal end of the needle,

the distal end of the needle comprising a tapered needle tip capable of penetrating tissue and having at least one passage to hold suture material, the tapered portion of the needle tip having a center line comprising the centroids of adjacent selected planar cross-sections of the tapered portion, each selected planar cross-section selected for having a smaller area than each proximally located planar cross-section having the same centroid as the selected planar cross-section, the distal end of the needle formed so that at least a first line is tangent to the center line and the first central axis portion;

a moveable arm, the moveable arm having a proximal end and a distal end, the proximal end of the moveable arm pivotally attached to the body, the distal end of the moveable arm consisting of a needle tip protector and pivoting from a closed position wherein the needle tip protector contacts the needle tip to an open position wherein the movable arm pivots toward the straight elongated portion of the hook-shape and no longer contacts the needle tip; and

a moveable arm actuator, the moveable arm actuator operable to move the movable arm between the open position and the closed position and comprising a compression member disposed within the body,



the compression member operable to urge the movable arm to the open position.

Claim14 (Original). A suturing apparatus as claimed in claim 13, wherein the apparatus comprises materials capable of tolerating autoclave sterilization.

Claim15 (Currently Amended). A suturing apparatus as claimed in claim 13, wherein the apparatus is configured for left-handed use.

Claim 16 (Original). A suturing apparatus as claimed in claim 13, further comprising a first handle and a second handle, the first handle and the second handle attached to opposite sides of the body.

Claim 17 (Original). A suturing apparatus as claimed in claim 13, further comprising a first depression and a second depression, the first depression and the second depression disposed upon opposite sides of the body.

Claim18 (Original). A suturing apparatus as claimed in claim 13, further comprising a first depression and a second depression, the first depression and the second depression disposed upon the underside of the body.

19 (Canceled)

Amendments to the Specification:

Amend paragraph [0021] as follows:

A hole 135 for suture material is bored radially through the needle a short distance below the base of the tip 133. The needle preferably comprises a proximal end and a distal end, the proximal end of the needle attached to the body and having a first central axis portion located within the proximal end of the needle, the distal end of the needle having a needle tip capable of penetrating tissue and having at least one passage to hold suture material, the tapered portion of the needle tip having a center line comprising the centroids of adjacent selected planar cross-sections of the tapered portion, each selected planar cross-section selected for having a smaller area than each proximally located planar cross-section having the same centroid as the selected planar cross-section, the distal end of the needle formed so that at least a first line is tangent to the center line and the first central axis portion.